

MONOFLEX

Polyurethane-bituminous elastomeric single-component waterproofing mortar



Description

MONOFLEX is a **single-component** formula composed of **polyurethane** and elastomeric polymers, bitumen emulsion, inorganic binders, quartz selected aggregates and special additives in water dispersion.

Ready to use, no mixing is required.

It comes as an easily workable creamy paste, applicable both horizontally and vertically, with high adhesion to all surfaces in concrete and masonry.

After full drying, it forms a flexible and waterproof membrane with good transpirability, resistant to the action of agents such as CO₂, SO₂ and saline aggression of chlorides and sulphates.

Use

It is used to waterproof concrete slabs for balconies, walkways, showers, kitchens, before laying ceramic floors, to protect surfaces also subject to deformation or subject to vibration, to waterproof and protect walls (plastered or masonry, especially in wainscoting), for finishing of fissured plasters (also old plastic) and therefore subject to small infiltrations, for elastic protective finishing of concrete structures.

Its composition makes it suitable to waterproof gypsum surfaces or plasterboard without applying insulation.

Preparation of surface

The surface must be thoroughly cleaned of all that could compromise the adhesion of the coating, such as saline efflorescence, mould, old paint, grease substances and loose and flaking parts.

It is best to carry out this operation with the help of equipment such as a sand blaster, by wet sandblasting or by washing with water under pressure.

The decayed surfaces must be restored using suitable cementitious products.

Any reinforcing rods subject to oxidation must be treated with anti-corrosive grouts.

The surfaces to be waterproofed must have correct inclinations and perfectly dry.

The surface, if very porous, can be moistened with water before application avoiding possible stagnation at the moment of application.

Product application

The product is ready to use and requires no equipment for mixing or dilution, however a short mix just before use is recommended.

During this stage, if deemed necessary by the operator it is possible to add up to with 5% water to adjust the consistency of the paste.

For the treatment of the wall-floor or wall-wall angle it is necessary to lay a thick layer of MONOFLEX to be coated with a fresh strip of BANDTEC, with a second layer of fresh product.

The strip should overhang the floor by at least 10 cm.

Drains may be treated with special preformed masks and installed with the technique just described.

Any surfaces subjected to stress, or located near fissures or construction joints, must be treated with BANDELLA installed by coating the reinforced sides with MONOFLEX followed by a second layer.

In any expansion joints it should be positioned to «omega inverted» coating only the reinforced edges of BANDELLA.

For horizontal surfaces, apply the product with a trowel in at least two coats, not exceeding the maximum thickness of 1.5 mm per coat.

The second coat can be applied when the first is sufficiently dry and hardened, and this occurs after about 24 hours.

Once the application is finished, the product can be stored for the next job by simply closing the container and placing it in a cool, dry place.

The possible laying of cement mortars on curbs or cement adhesives for ceramic coverings may be carried out after at least 5 days.

For applications on surfaces greater than 10 m² use the reinforcing agent ARMO 150 incorporated into the first coat of MONOFLEX.

Consumption

3.5-4 kg/m² of product in two layers (2 mm).

Packaging

MONOFLEX is supplied in plastic buckets of 5, 10, 20 kg.

Store the product in its original pail, sealed and at temperatures between +5°C and +35°C, protected from direct sun light and frost.

In these conditions it remains stable for at least 12 months.

Warning

After application ensure that the surface exposed to air is not subject to rapid water evaporation.

Do not work in temperatures below +10°C.

Changes in temperature can cause increases or decreases in the time taken for the product to start and stop setting.

All tools used for laying may be washed with water before hardening.

For further information or particular uses, contact our technical department.

Safety instruction

The product does not contain solvents, therefore it is not flammable or harmful to health.

Use gloves and eye protection.

Specifications

Waterproofing in positive water pressure on concrete substrates through single-component waterproofing elastic mortar (MONOFLEX type by TECA) to apply in the final thickness not less than 2 mm.

The layer is suitable to directly receive the ceramic coating installed with suitable class adhesives.

Technical data

Product identification data	Value	Tolerance
Appearance	paste	
Colour	black	
Density	1,4 g/cm ³	±0,05
Residual dry matter	80%	±5 pp
pH	9	±0,5
Application data		
Flash point	non flammable	
Shelf life in original packaging	12 months	
Maximum thickness of application	1,5 mm/coat	
Final thickness of the layer	minimum 2 mm	
Air application temperature	from +10°C to +35°C	
Surface application temperature	from +10°C to +35°C	
Air humidity	max 80%	
Surface humidity	max 5%	
Waiting time touch dry	6 h	
Waiting time complete drying	5 days	
Waiting time second layer	24 hours	
Waiting time laying coating	5 days	
Class of adhesives for laying ceramics	C2 S1/S2	
Artificial exposure to atmospheric agents for 5000 hours (QUV test)	No swelling or cracking. Slight variation of the color that does not change its characteristics.	
Final performance (average thickness 2.0 mm)	Acceptance limits according to EN 14891	Monoflex performance results
Water resistance under pressure according to EN 14891-A.7 (1.5 bar for 7 days of positive thrust):	no penetration	no penetration
Crack-bridging ability at +23°C according to EN 14891-A.8.2 (mm):	> 0,75	class A5 (>2,5 mm)
Initial adhesion according to EN 14891-A.6.2 (MPa):	≥ 0,5	0,7
Adhesion after immersion in water according to EN 14891-A.6.3 (MPa):	≥ 0,5	0,7
Adhesion after heat action according to EN 14891-A.6.5 (MPa):	≥ 0,5	0,7
Adhesion after cycles of freeze-thaw according to EN 14891-A.6.6 (MPa):	≥ 0,5	0,5
Adhesion after immersion in basic water according to EN 14891-A.6.9 (MPa):	≥ 0,5	0,6
Adhesion after contact with chlorinated water according to EN 14891-A.6.7 (MPa):	≥ 0,5	0,6

Adhesion values according to EN 14891 determined with Monoflex and C2 type cementitious adhesive according to EN 12004.

Final performances	Test method	Requirements according to EN 1504-2 coating (C) principles PI, MC, IR	Monoflex performance results
Adhesion to concrete - after 28 days at +23°C e 50% U.R. (N / mm ²):	EN 1542	For flexible systems without traffic: ≥ 0,8	1,2
Temporal thermal compatibility, measured as adhesion (N / mm ²):	EN 13687-2		1,13
Static crack-bridging at +23°C expressed as maximum crack width (mm):	EN 1062-7	from class A1 (0,1 mm) to class A5 (2,5 mm)	Class A5 3,75 mm
Dynamic crack-bridging at +23°C expressed as resistance to cracking cycles:	EN 1062-7	from class B1 to class B4.2	Class B 3.2
Water vapor permeability - equivalent air thickness S _D (m):	EN ISO 7783-1	class I: SD < 5 m (permeable to vapor)	S _D = 4,91 Class I
Water resistance expressed as capillary absorption (kg / m ² · h ^{0,5}):	EN 1062-3	< 0,1	0,01
Permeability to carbon dioxide (CO ₂) - diffusion of equivalent air thickness S _{DCO2} (m):	EN 1062-6	> 50	S _{DCO2} = 365 m

Packaging

Pail size	Pails per pallet
5 kg	125
10 kg	64
20 kg	42

We reserve the rights to change or modify the nominal values without prior notice or advice. The information contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.